

Uruguay

Regional Development Project

Report date: March 2001

Field survey: August 2000

1. Project Profile and Japan's ODA Loan



Project Area Location Map (The project areas are scattered throughout the country)



Facilities installed under the Project

1.1. Background

After the shift to civil administration in March 1985, the government of Uruguay developed a Mid-Term Public Investment Program (1987-1989), which focused specifically on the development of the transport and energy sectors, with the aim of laying the foundations for long-term economic growth, and increasing production in phases. As specific measures for the Program, the government developed the National Land Planning Development Program (1988-1989) aimed at developing national land in a well-balanced manner through the promotion of underdeveloped areas and agricultural regions. The Program included basic infrastructure development plans, such as improving roads and railways and electrifying agricultural villages on a nationwide scale.

1.2. Objectives

The objective of the project was to improve roads and railways and electrify agricultural villages throughout Uruguay, thereby contributing to the socio-economic development of underdeveloped areas outside the Montevideo capital area and reducing the regional disparities between urban and rural areas.

1.3. Project Scope

The scope of the project is as specified below and the ODA loan covered the portion of project costs quoted in foreign currency.

- (1) Road improvement: Procurement of repair equipment and asphalt materials
- (2) Railway improvement: Procurement of materials and equipment for railroad track

maintenance and improvement as well as locomotives, and procurement and installation of UHF communications systems

- (3) Electrification of agricultural villages: Installation of new power transmission systems and expansion of existing ones, installation of new secondary power transmission systems and expansion of existing ones, and installation of new power distribution networks and expansion of existing ones
- (4) Consulting services: Provision of monitoring services connected with project implementation; coordination, assistance and liaison services

1.4. Borrower: The Oriental Republic of Uruguay

Executing Agency

Coordination agency: National Planning & Budget Agency (OPP)

Road improvement: Road Department, Ministry of Transport and Public Works (DNV)

Railway improvement: National Railway (AFE)

Electrification of agricultural villages: Electric Transmission Office (UTE)

1.5. Outline of Loan Agreement

Loan amount/Loan disbursed amount	¥7,166 million/¥3,867 million
Exchange of notes/Loan agreement	September 1989/October 1989
Terms and conditions	Interest rate: 4.0% (3.25% for consulting services), Repayment period (grace period): 25 year (7 years), General untied
Final disbursement date	December 1997

2. Results and Evaluation

2.1. Relevance

The project aimed to improve roads and railways and electrify agricultural villages throughout the country in order to contribute to the socioeconomic development of regions outside the capital and reduce the regional disparities between urban and rural areas. This aim was consistent with the National Land Planning Development Program, and from a general perspective, the project was considered relevant.

2.2. Efficiency

The disbursement period under the loan agreement for the project was extended by 18 months beyond the initial schedule due to repeated changes in its scope, particularly due to changes made by DNV and UTE, etc. The reasons for the delay are outlined in terms of individual project items below.

Road Improvement:

Changes in government policies concerning the implementation of the project and

repeated design changes substantially delayed the bidding process. Although the railway project was completed within the deadline, the road improvement project and rural electrification project failed to be completed within the deadline after the disbursement period under the loan agreement was extended. Changes in the policy of consigning road improvement to the private sector made the decision-making process for the road project particularly time-consuming.

Railway Improvement:

There were no major delays in the implementation of the railway project. Locomotives went into operation without delay after procurement, and the introduction of UHF communications systems was completed in February 1996. All materials were properly procured as scheduled.

Electrification of Agricultural Villages:

The electrification project was significantly delayed. The reasons for the delay were that (1) a proposal was made to apply favorable procurement conditions to domestic contractors and discussions and coordination pertaining to the proposal took time, and (2) as of 1994, the initial plan was affected by the restrictions placed on UTE's budgets.

The actual total project cost was reduced from the initially estimated ¥12.377 billion to ¥7.42 billion mainly because of the changes in the road improvement plan (light machinery was procured instead of heavy machinery due to changes in government policies) and the rural electrification plan (the plan for constructing power distribution networks was cancelled and the scale of the secondary power transmission facility plan was reduced).

2.3. Effectiveness

Road improvement:

The project was primarily designed to repair and maintain scattered sections of existing roads nationwide. Although the executing agency does not have relevant data, it is considered that the project made a certain contribution to reductions in travel times and rendered other benefits through the repairs and maintenance mentioned above.

Railway Improvement:

The project was primarily designed to repair and maintain existing railways and related facilities, and it is difficult to calculate its quantitative effects. The status of railway operation is as shown in Table 1. The average distance covered by vehicles was reduced from 203.8 km/day before completion of the project(1991-1995) to

184.5 km/day after completion of the project (1996-1999). On the other hand, the total number of trains operated, which stood at 5,249 times in 1995 (prior to project completion), increased steadily after completion of the project and reached 7,514 times in 1999. Cargo transport volume has also continued to grow since project completion, increasing from 184 tons/km/day before project completion to 272 tons/km/day in 1999. After peaking (US\$28 million) in 1997, operating income declined to US\$23 million in 1998 and US\$20 million in 1999.

Table 1 Status of Railway Operation

	1991	1992	1993	1994	1995	1996	1997	1998	1999
Distance covered by vehicles (km/day)	214	211	191	196	207	186	189	176	187
Number of trains operated	5,343	5,577	5,611	5,374	5,249	5,620	5,927	6,999	7,514
Cargo transport volume (tons/km/day)	203	215	178	189	184	182	204	241	272
Operating income (US\$1 million)	13	12	16	21	26	25	28	23	20

Source: AFE

Electrification of Agricultural Villages:

The power transmission and distribution loss ratio is low (3-4%) for both primary and secondary transmission and distribution systems, indicating that power transmission and distribution are highly efficient. The implementation schedule was significantly delayed as compared to the initial plan. Therefore, during this interval, the executing agency used its own funds to electrify areas scheduled to be covered by the project. Accordingly, no areas were electrified under the project.

The executing agency reports, however, the project helped produced better-quality services (reduced number of blackout, stable voltage, etc.) that through the construction of new transformer substations and other measures in already electrified areas.

2.4. Impact

Environmental Impact

The objective of the project was to repair and maintain existing roads/railways and facilities, and no particular negative impact was exerted on the environment. Although the executing agency does not have relevant data, it is inferred that the noise and powder/dust reductions generated by road maintenance and repair work have had a positive impact on the environment in the areas concerned.

2.5. Sustainability

(2.5.1.) Operation and Maintenance

UTE: Electrification of Agricultural Villages

The operation and maintenance of new facilities established under the project is the responsibility of UTE and is executed by its personnel (8,794 persons nationwide as of December 1999). Technology transfer is carried out within UTE and sustainable operation and maintenance is considered possible. Necessary budgets are being allocated to cover operation and maintenance costs (for all operations of UTE), and there is no problem with the operation and maintenance system in terms of funding. Meanwhile, rehabilitation for existing facilities have been implemented by the private sector.

AFE: Railway Improvement

The executing agency utilizes federal budgets and its own funds to operate, maintain and rehabilitate its existing facilities on a continuous basis employing in-house personnel with suitable qualifications to perform such duties. The annual budgets for the entire operations of AFE in 2000 totaled approximately US\$8 million of which US\$2 million was allocated to operation and maintenance (for the entire operations of AFE).

Government funding for railway improvement plans has stalled, and privatization is under consideration as a way of breaking the deadlock.

Table 2 Annual AFE Budgets and Operation/Maintenance Costs

	1991	1992	1993	1994	1995	1996	1997	1998	1999
Annual budgets (US\$1 million)	7	8	7	7	7	7	7	8	8
Operation/maintenance costs (US\$1 million)	-	1.5	1.5	1.5	1.6	1.5	1.7	1.9	2.0

Source: AFE

DNV: Road Improvement

National roads, including the project roads, are basically maintained on a routine and continuous basis by DNV personnel using its budgets. Rehabilitation work is consigned to private enterprises. The total length of roads maintained in 1997 was 8,680 km.

Comparison of Original and Actual Results

Item	Plan	Results
1. Project scope		
(1) Road improvement		
Procurement of construction machinery		
Shovel car	9 units	*Due to policy changes, light machinery was procured instead of heavy machinery.
Bulldozer	20 units	
Spare parts		
Procurement of materials		
Asphalt cement	12,951 tons	5,000 tons
Cutback asphalt	33,186 m ³	10,260 m ³
(2) Railway improvement		
Improvement of railway tracks		
Wooden tie	183,000 units	264,980 units
Anti-creeper	73,200 units	Cancelled
Thermit welding	6,830 locations	7,710 locations
Turnout	10 locations	Cancelled
Other		26 manually driven inspection vehicles
Maintenance of railway tracks		
Wooden tie	279,000 units	174,020 units
Anti-creeper	21,000 units	Cancelled
Thermit welding	20,700 locations	19,820 locations
Herbicide	17,100 kg	12,160 kg
Procurement of vehicles		
DEL 1500HP vehicles	10 units	Same as left
UHF communications systems	1 set	Same as left
(3) Electrification of agricultural villages		
Construction work for power transmission lines		
Establishment of new transformer substations (150/30KV)	3 locations	4 locations
Expansion of existing transformer substations	7 locations	4 locations
Laying of new power transmission lines (150KV)	50 km	57 km
Construction work for transformer substations		
Establishment of new transformer substations (150/30KV S/S)	6 locations	3 locations
Establishment of new transformer substations (150/60KV S/S)		3 locations
Establishment of new transformer substations (30/60KV S/S)	2 locations	2 locations
Laying of new secondary power transmission lines	208 km (30KV)	10 km
Power distribution network		
Laying of new power distribution lines	600 km	Cancelled
Installation of new break and make switches	18 units	
Current transformer	510 units	
(4) Consulting services		
Project manager	24 M/M	Consultant: 11M/M
Mechanical engineer	24 M/M	
Electrical engineer	24 M/M	

Item	Plan	Results
2. Implementation Schedule (1) Road improvement (2) Railway improvement (3) Electrification of agricultural villages (4) Consulting services Completion	January 1989 to January 1992 July 1989 to January 1992 January 1989 to July 1991 January 1989 to January 1992 January 1992	August 1993 to December 1998 June 1991 to December 1997 September 1992 to October 1998 1994 to December 1997 December 1997
3. Project cost Foreign currency Local currency Total ODA loan portion Exchange rate	¥7,166 million US\$38.9 million ¥12,377 million ¥7,166 million US\$1.00=¥134.00	¥4,098 million US\$30.55 million ¥7,420 million ¥3,867 million US\$1.00=¥94.08~134.00 (Quoted annually)